NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

Amendment No. 23

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	
1. Department of the Army U.S. Army Communications- Electronics Command AMSEL-SF-RER	In accordance with the letter dated June 28 2001, 3. License number 29-01022-14 is amended in its entirety to read as follows:
2. Fort Monmouth, New Jersey 07703-5024	4. Expiration date October 31, 2003
	5. Docket No. 030-29741 Reference No.

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Cobalt 60	A. Sealed sources (Gamma Industries Type VD-HP, Gamma Industries Dwg. No. 602-7001-04 and J.L. Shepherd Type 78 10, J.L. Shepherd Dwg. No. A-0466-A)	A. Not to exceed 10 curies per source and 80 curies total
B. Cobalt 60	B. Sealed sources (Gulf Nuclear Inc., Dwg. No. A-5001; US Army Edgewood Arsenal, USAEA Dwg. No. C124-10-34)	B. Not to exceed 130 millicuries per source and 13 curies total
C. Cobalt 60	C. Sealed source (U.S. Nuclear Type 366)	C. 13 curies
D. Krypton 85	D. Sealed sources (USAEA Dwg. No. B124-12-8)	D. Not to exceed 6 millicuries per source and 120 curies total
E. Strontium 90	E. Sealed sources (US Army Electronics Command, ECOM Dwg. No. SM-B-509057)	E. Not to exceed 50 millicuries per source and 60 curies total

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6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
F. Strontium 90	F. Sealed sources (ECOM Dwg. No. SM-B-509048)	F. Not to exceed 150 microcuries per source and 45 millicuries total
G. Strontium 90	G. Sealed sources (Minnesota Mining and Manufacturing Company, 3M Dwg. No. 12-1921-0474-8)	G. Not to exceed 45 millicuries per source and 90 curies total
H. Strontium 90	H. Sealed sources (3M Dwg. No. 12-1921-0474-8)	H. Not to exceed 36 microcuries per source and 18 millicuries total
I. Cesium 137	I. Sealed sources (Type 371 Gamma Source Dwg. No. R.-0060)	I. Not to exceed 150 curies per source and 600 curies total
J. Cesium 137	J. Sealed sources (J.L. Shepherd Type 6810, J.L. Shepherd Dwg. No. A-0096-C)	J. Not to exceed 130 curies per source and 2600 curies total
K. Plutonium 239	K. Electroplated sources (Eberline Instrument Corp., Model 594-1)	K. Not to exceed 23 micrograms (1.4 microcuries) per set and 0.0115 grams total
L. Americium 241	L. Sealed sources (Amersham Radiochemical Center, Amersham Code 2084)	L. Not to exceed 10 millicuries per source and 50 millicuries total
M. Americium 241	M. Sealed sources (Amersham Model AMR 8122)	M. Not to exceed 1 microcurie per source and 100 microcuries total
N. Americium 241	N. Sealed sources (Amersham Model AMRB 8152)	N. Not to exceed 10 microcuries per source and 50 microcuries total
O. Americium 241	O. Sealed sources (Amersham Model AMRB 1659)	O. Not to exceed 20 microcuries per source and 100 microcuries total

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P. Thorium 230	P. Electroplated source (Eberline Instrument Corp., Model No. CS-12)	P. Not to exceed 0.98 micrograms (20 nanocuries) per source and 1 milligram total
Q. Thorium 232	Q. Metal foils	Q. Not to exceed 2.7 grams (300 nanocuries) per source and 4.05 kilograms total
R. Plutonium 239	R. Electroplated sources (Eberline Instrument Corp., Model No. CS-1)	R. Not to exceed 163 nanograms (10 nanocuries) per source and 1 gram total
S. Thorium 232	S. Solid (Thorium Fluoride coating on optical systems)	S. Not to exceed 3 grams (0.330 microcuries) per optical system and 40 kilograms total
T. Cesium 137	T. Sealed Sources (Oak Ridge National Laboratory Model ORNL-2339A or ORNL DSK-2384)	T. 130 curies per source and 2860 curies total
U. Cesium 137	U. Sealed Sources (Nuclear Chicago Model OCD-S-104)	U. 16 millicuries per source and 320 millicuries total
V. Hydrogen 3	V. Tritiated paint in Lensatic Compasses (NSN 6605-00-846-7618)	V. 120 millicuries per compass and 480 curies total
W. Hydrogen 3	W. Sealed light sources in Lensatic Compasses (NSN-6605-00-151-5337)	W. 190 millicuries per compass and 5700 curies total
X. Depleted Uranium	X. Metal	X. 1870 kilograms
Y. Cesium 137	Y. Sealed Sources (3M Model 4F6S, Monsanto Research Co. Model 24148, and Amersham Model CDC.700 and CDC.711m)	Y. No single source to exceed the maximum activity specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State

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9. Authorized use:

A. through R. Calibration and operational checking of radiation detection instrumentation.
S. Optical coating on thermal imaging devices.
T. Use in FEMA Model CDV-794 calibrators for instrument calibrations.
U. Use in FEMA Model CDV-790 calibrators for instrument calibrations.
V. and W. Possession, storage, and distribution to any U.S. Department of Defense elements and reserve components including the U.S. Army, U.S. Navy, U.S. Marine Corps, U.S. Air Force, Defense Supply Agency, the National Guard and the Air National Guard.
X. Shielding for CDV-794 instrument calibrator.
Y. For use in Ohmart Models SH-F2 ,and SH-F3 gauging devices included in Science Applications International, Inc. (SAIC) Model Mobile VACIS devices for the detection of explosives and/or contraband.

CONDITIONS

10. A. Licensed material may be used only at the licensee's facilities located at Fort Monmouth, New Jersey, and at Department of Defense installations anywhere in the United States.

B. Licensed material in Item 6.Y. may be used at temporary job sites of the licensee anywhere in the United States.

11. A. Licensed material shall only be used by, or under the supervision and in the physical presence of, individuals who have completed the training described in application dated July 20, 1992 and letter dated May 1, 1998, with enclosures.

B. Licensed material in Item 6.Y. shall ve used by or under the supervision of individuals who have received the training described in letters dated June 28, 2001 and August 10, 2001.

C. The Radiation Safety Officer for this license is Richard J. Lovell.

12. A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State.

B. Notwithstanding Paragraph A of this Condition, sealed sources designed to primarily emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.

C. In the absence of a certificate from a transferor indicating that a leak test has been made within the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or under equivalent regulations of an Agreement State, prior to the transfer, a

sealed source received from another person shall not be put into use until tested and the test results received.

D. Sealed sources need not be tested if they contain only hydrogen-3; or they contain only a radioactive gas; or the half-life of the isotope is 30 days or less; or they contain not more than 100 microcuries of beta- and/or gamma-emitting material or not more than 10 microcuries of alpha-emitting material.

E. Sealed sources need not be tested if they are in storage and are not being used; however, when they are removed from storage for use or transferred to another person and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.

F. The leak test shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations.

G. Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the licensee or by other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.

H. Records of leak test results shall be kept in units of microcuries.

13. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.

14. The licensee shall conduct a physical inventory every six months to account for all sealed sources and devices containing licensed material received and possessed under the license.

15. The licensee shall not acquire licensed material in a sealed source or device unless the source or device has been registered with the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or equivalent regulations of an Agreement State.

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16. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

17. The following services shall not be performed by the licensee: installation, initial radiation surveys, relocation, removal from service, dismantling, alignment, replacement, disposal of the sealed source and non-routine maintenance or repair of components related to the radiological safety of the gauge (i.e., the sealed source, the source holder, source drive mechanism, on-off mechanism (shutter), shutter control, shielding). These services shall be performed only by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.

18. A. The licensee may maintain, repair, or replace device components that are not related to the radiological safety of the device and that do not result in the potential for any portion of the body to come into contact with the primary beam or in increased radiation levels in accessible areas.

    B. The licensee may not maintain, repair, or replace any of the following device components: the sealed source, the source holder, source drive mechanism, on-off mechanism (shutter), shutter control, or shielding, or any other component related to the radiological safety of the device, except as provided otherwise by specific condition of this license.

19. The licensee shall operate each device containing licensed material within the manufacturer's specified temperature and environmental limits such that the shielding and shutter mechanism of the source holder are not compromised.

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20. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

A. Application dated July 20, 1992
B. Letter dated June 15, 1993
C. Letter dated April 6, 1994
D. Letter dated February 28, 1997
E. Letter dated July 30, 1997
F. Letter dated August 27, 1997, with attachment
G. Letter dated September 10, 1997
H. Letter dated May 1, 1998
I. Letter dated July 2, 1998
J. Letter dated May 13, 1998, with attached survey report
K. Letter dated July 14, 1999 with attached survey report
L. Letter dated September 1, 1999
M. Letter dated September 10, 1999
N. Letter dated April 19, 2000, with attached survey report
O. Letter dated July 6, 2000
P. Letter dated August 18, 2000
Q. Letter dated September 14, 2000, with enclosure
R. Letter dated February 5, 2001
S. Letter dated March 28, 2001
T. Letter dated June 28, 2001
U. Letter dated August 10, 2001

For the U.S. Nuclear Regulatory Commission

Date August 23, 2001

By

Judith A. Joustra
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety
Region I
King of Prussia, Pennsylvania 19406

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